00260 "E202960

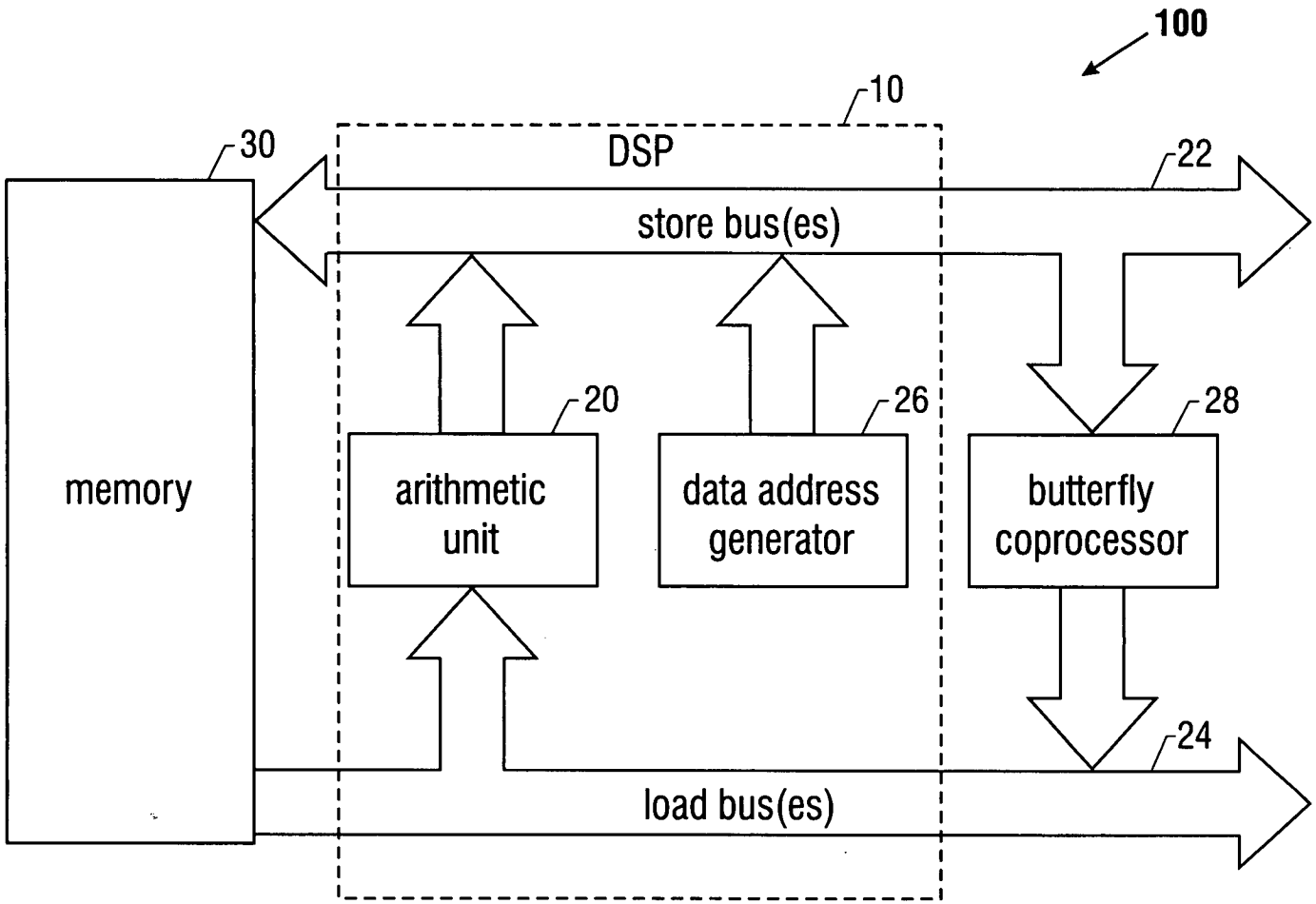


FIGURE 1

0082601 1220360

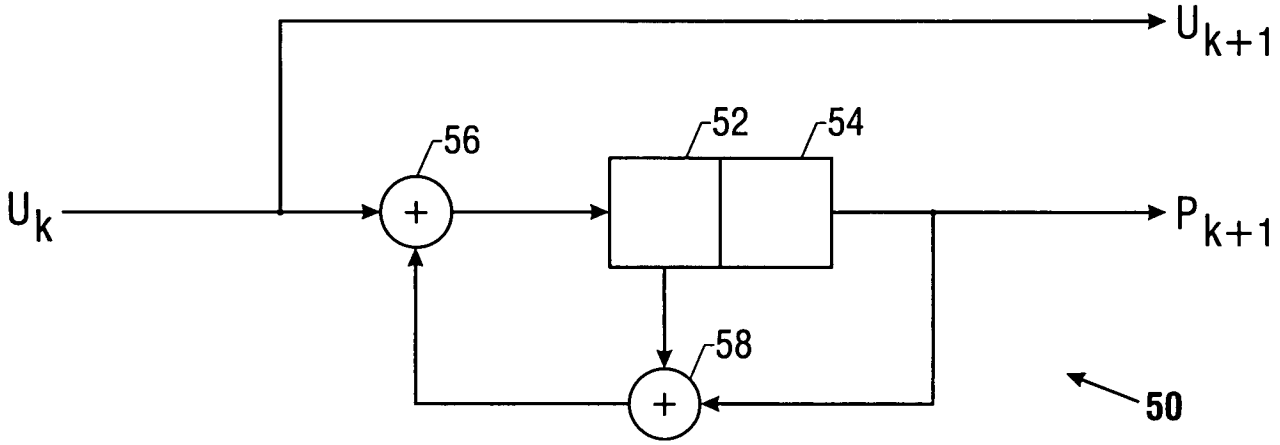


FIGURE 2

008260" TE202960

state transition table 60

state k (shift regs)	U_k input	code word U_{k+1} P_{k+1}	state k+1 (shift regs)
00	0	00	00
00	1	10	10
01	0	00	10
01	1	10	00
10	0	01	11
10	1	11	01
11	0	01	01
11	1	11	11

FIGURE 3

0605950-4220950

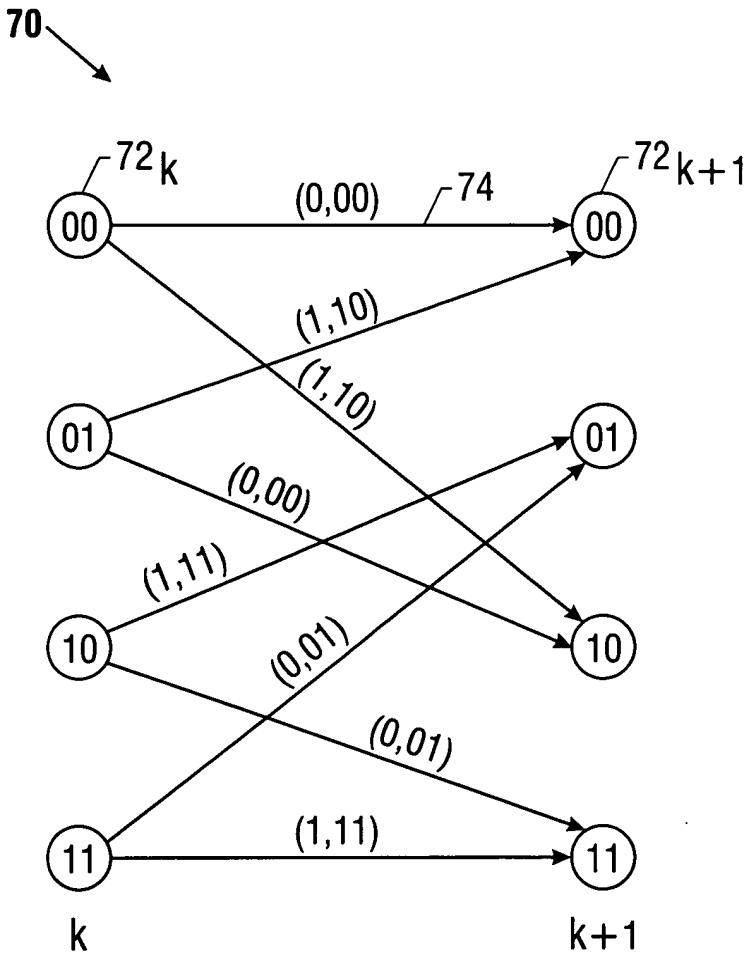


FIGURE 4

00860 TE20960

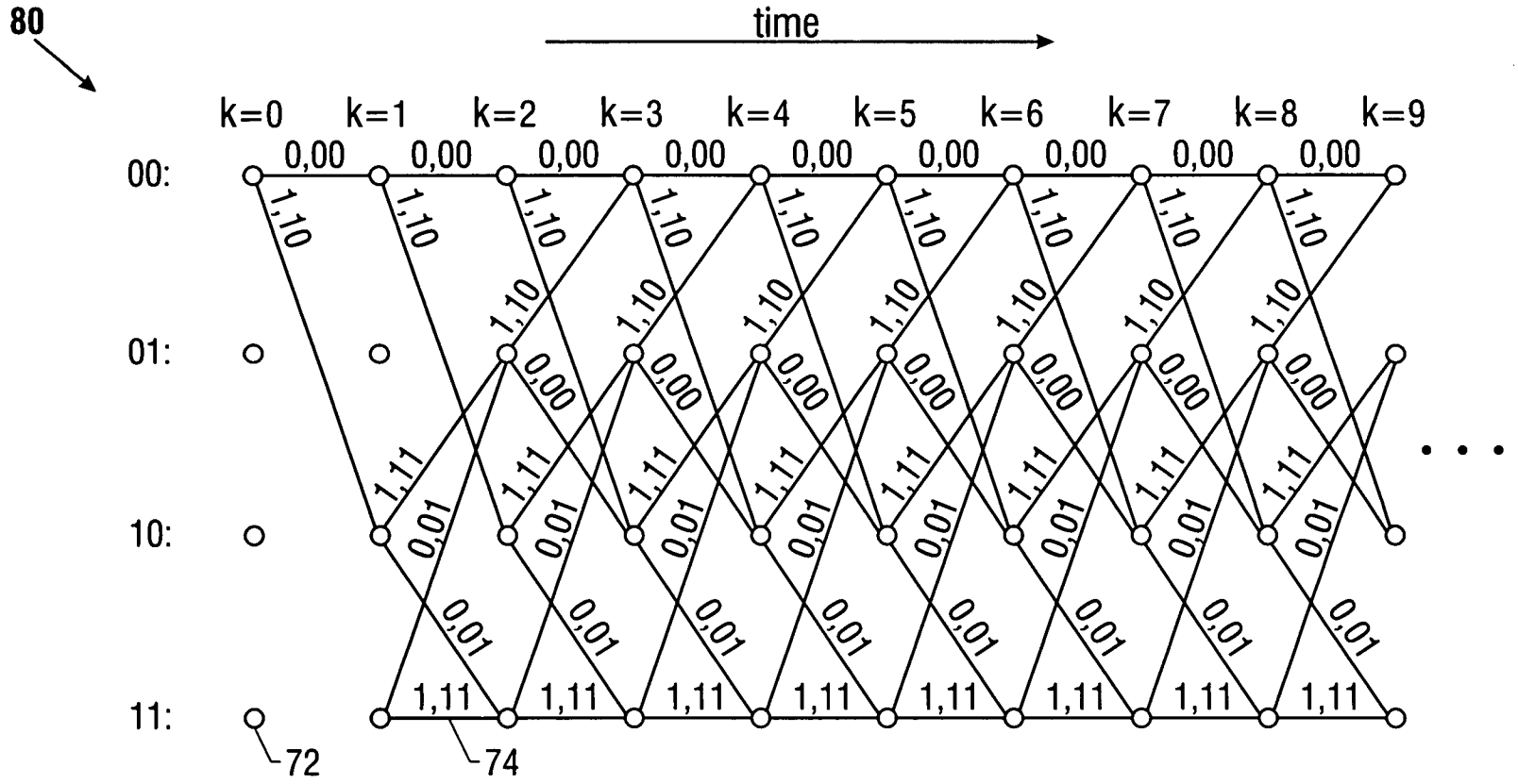
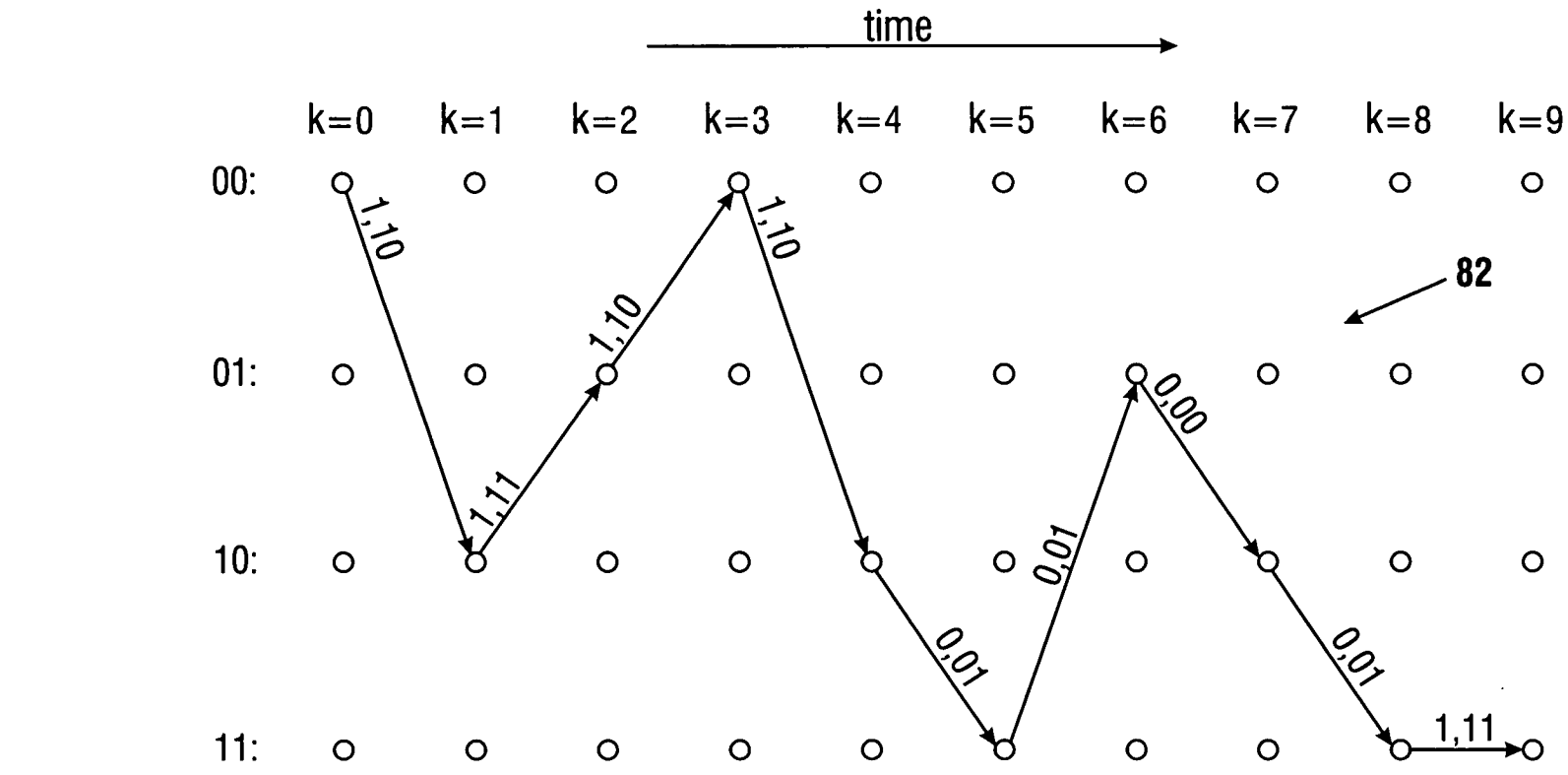


FIGURE 5



		k=0	k=1	k=2	k=3	k=4	k=5	k=6	k=7	k=8	k=9
input value	U_{k+1}	1	1	1	1	0	0	0	0	1	-84
output value	U_{k+1} P_{k+1}	10	11	10	10	01	01	00	01	11	-86

FIGURE 6

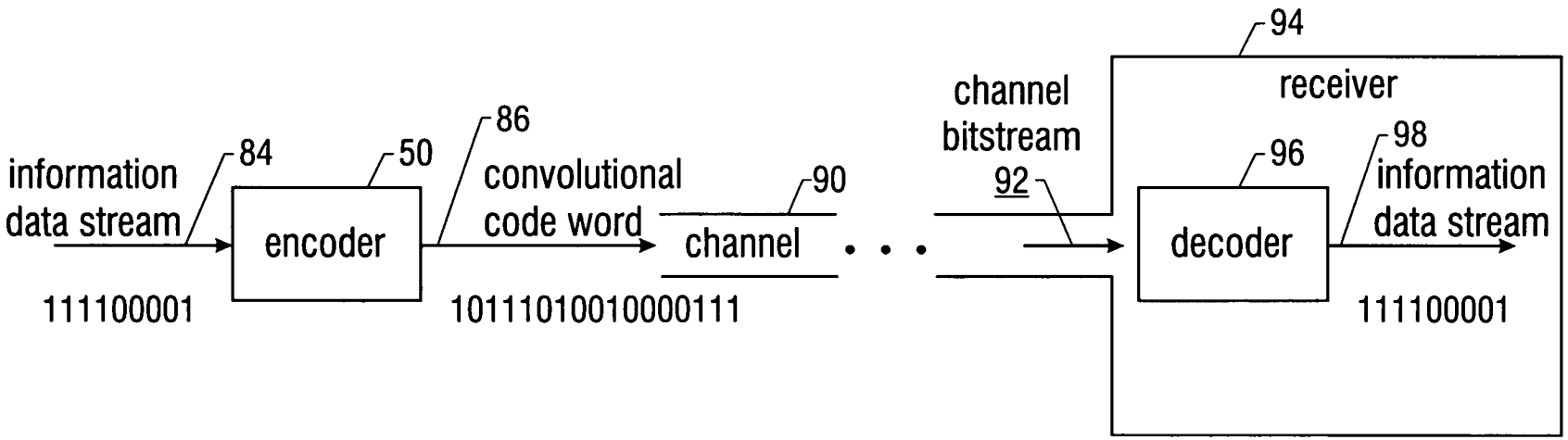

94
receiver
channel
bitstream
92
86
84
50
information
data stream
encoder
convolutional
code word
90
channel
96
98
information
data stream
decoder
111100001
10111010010000111
111100001

FIGURE 7

008260" TE20Z960

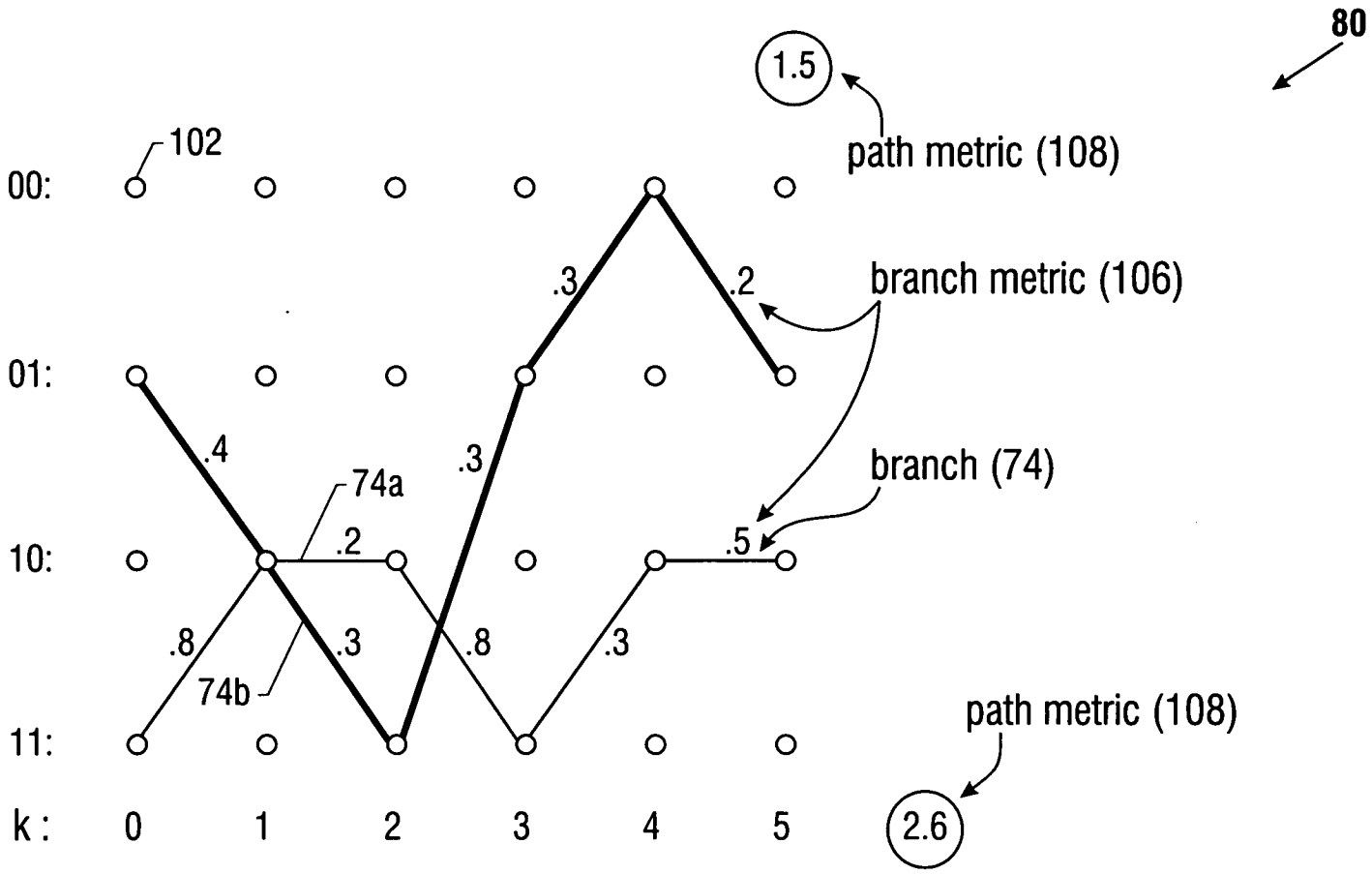


FIGURE 8

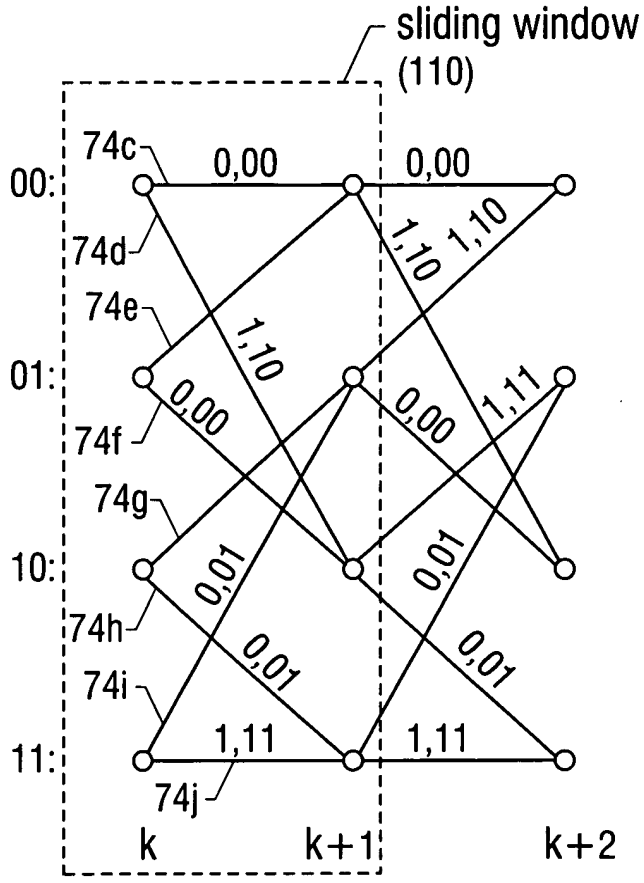

sliding window
(110)
74c
74d
74e
74f
74g
74h
74i
74j
00:
01:
10:
11:
0,00
0,00
1,10
1,10
1,10
0,00
0,00
1,11
0,01
0,01
0,01
0,01
1,11
1,11
k
k+1
k+2

FIGURE 9

DD8260 "TE2029G0

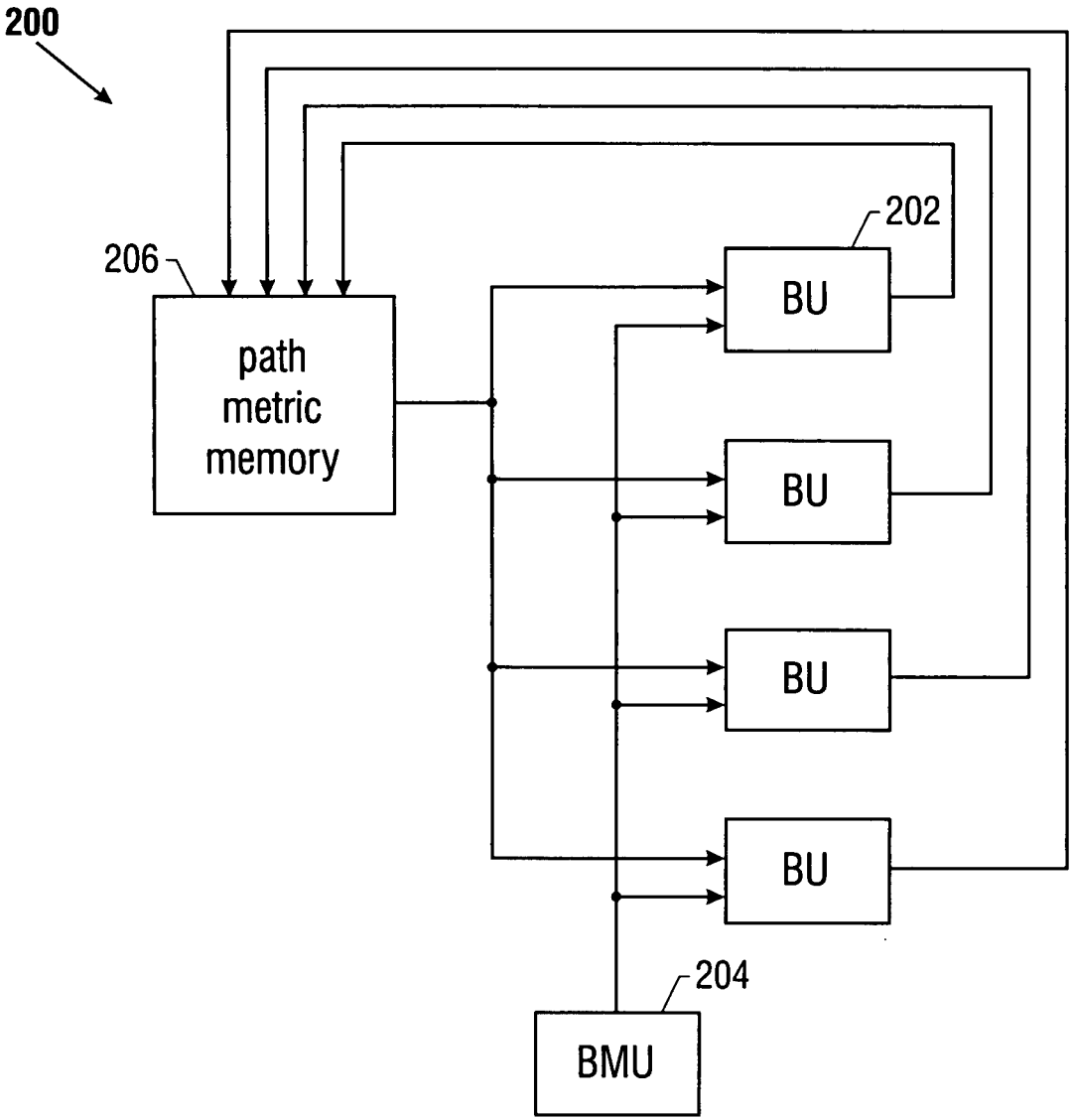


FIGURE 10

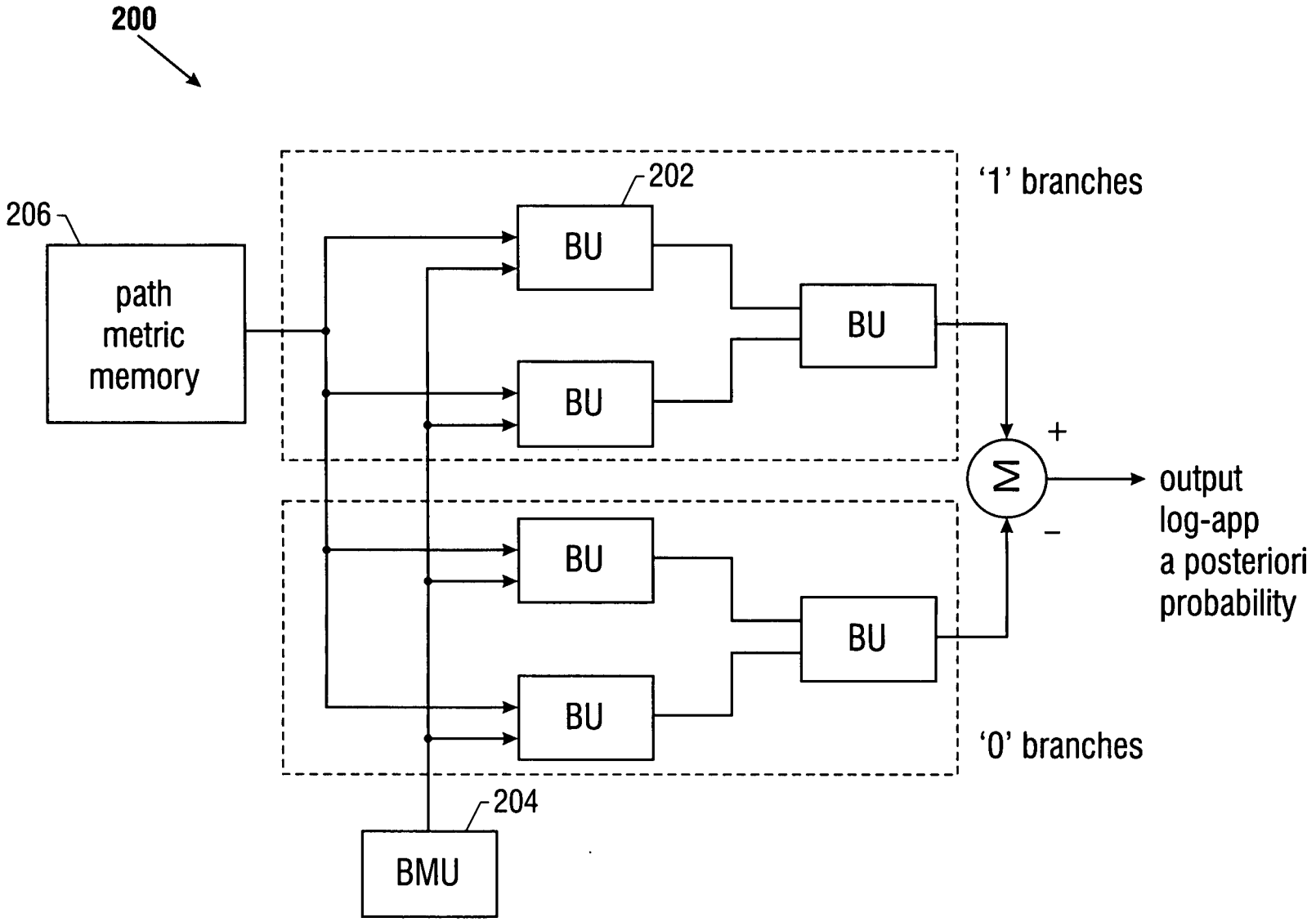

200
206
path metric memory
202
BU
BU
BU
BU
BU
BU
'1' branches
'0' branches
+
−
output log-app a posteriori probability
204
BMU

FIGURE 11

00826 "TE202960

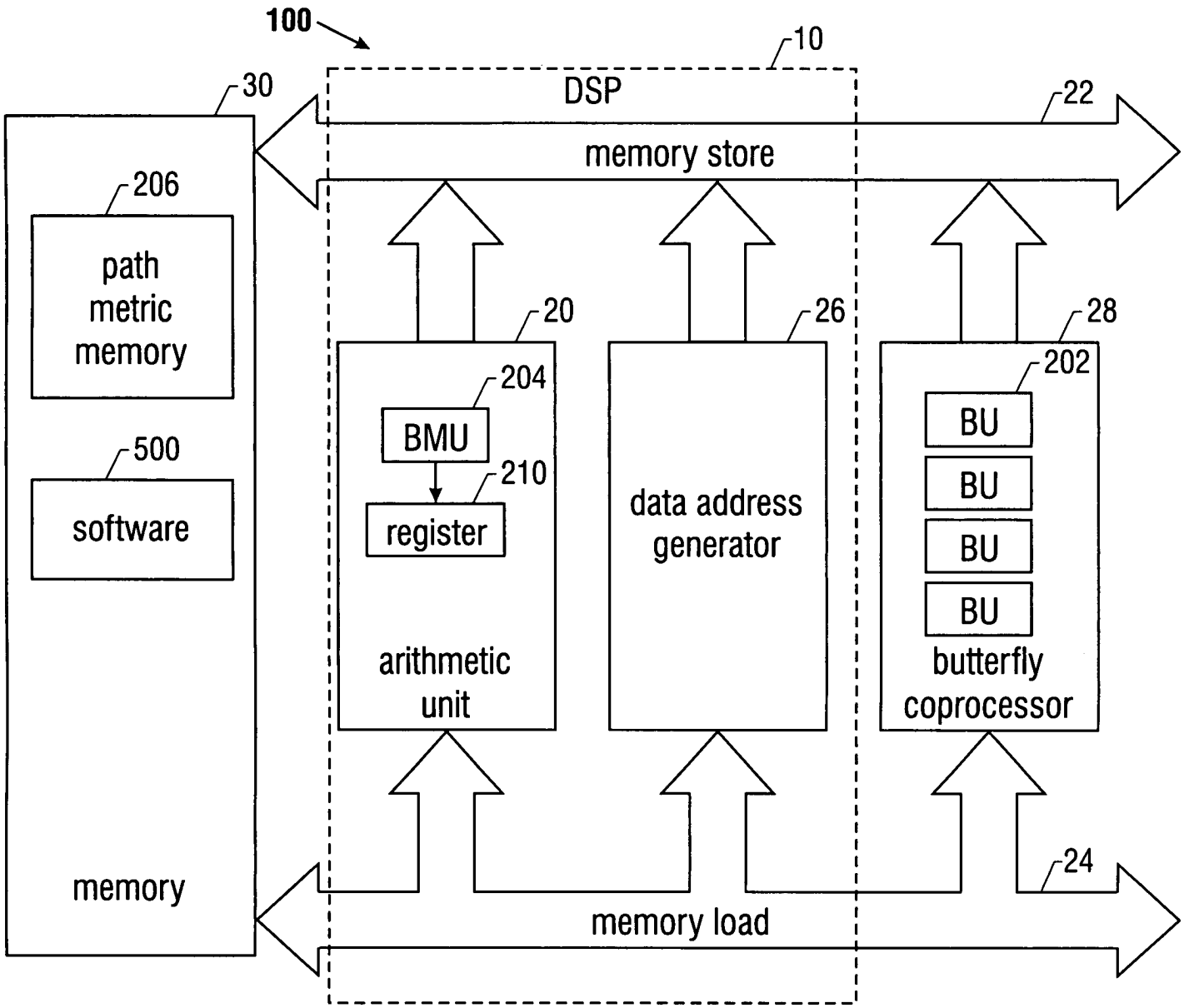


FIGURE 12

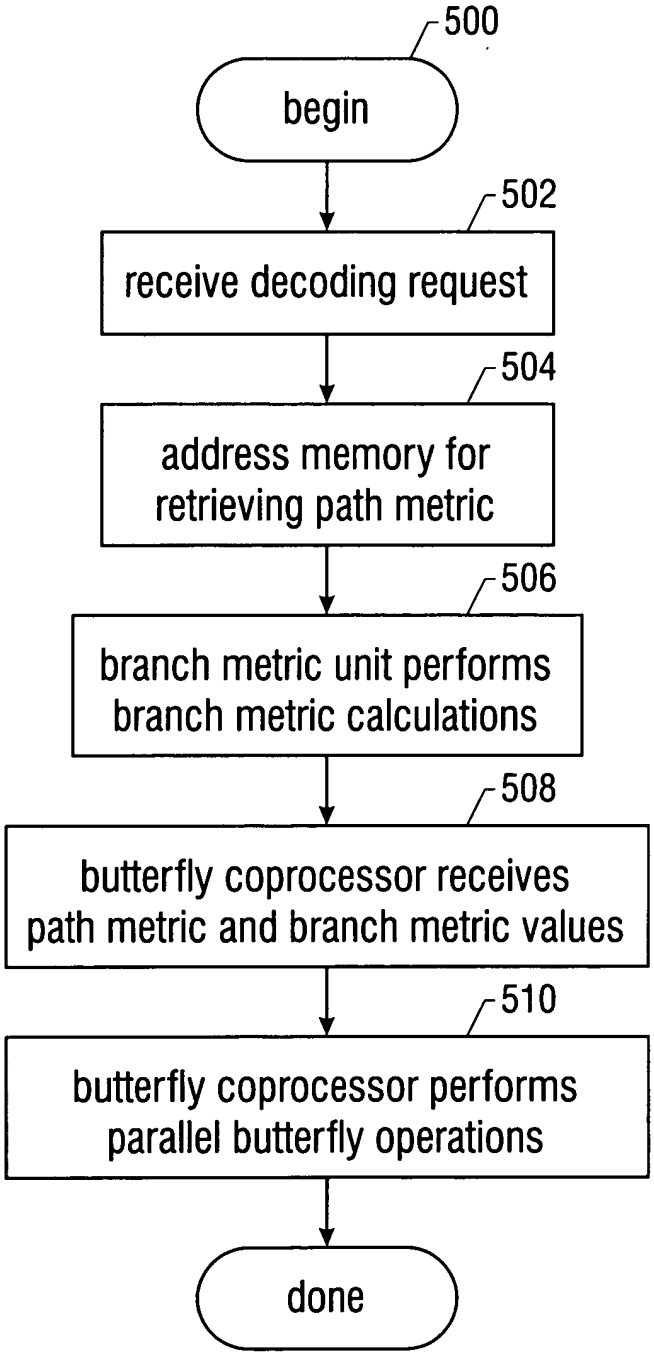

500
begin
502
receive decoding request
504
address memory for retrieving path metric
506
branch metric unit performs branch metric calculations
508
butterfly coprocessor receives path metric and branch metric values
510
butterfly coprocessor performs parallel butterfly operations
done

FIGURE 13

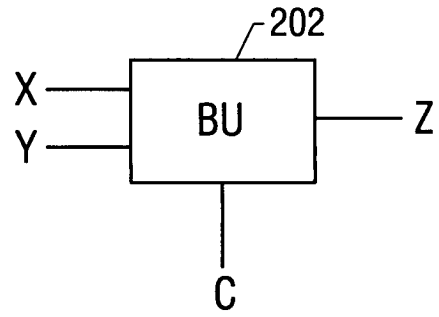


FIGURE 14A

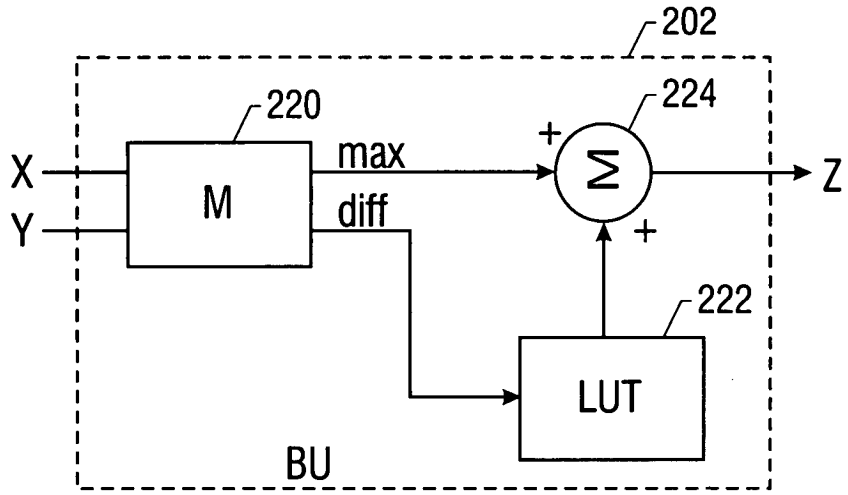
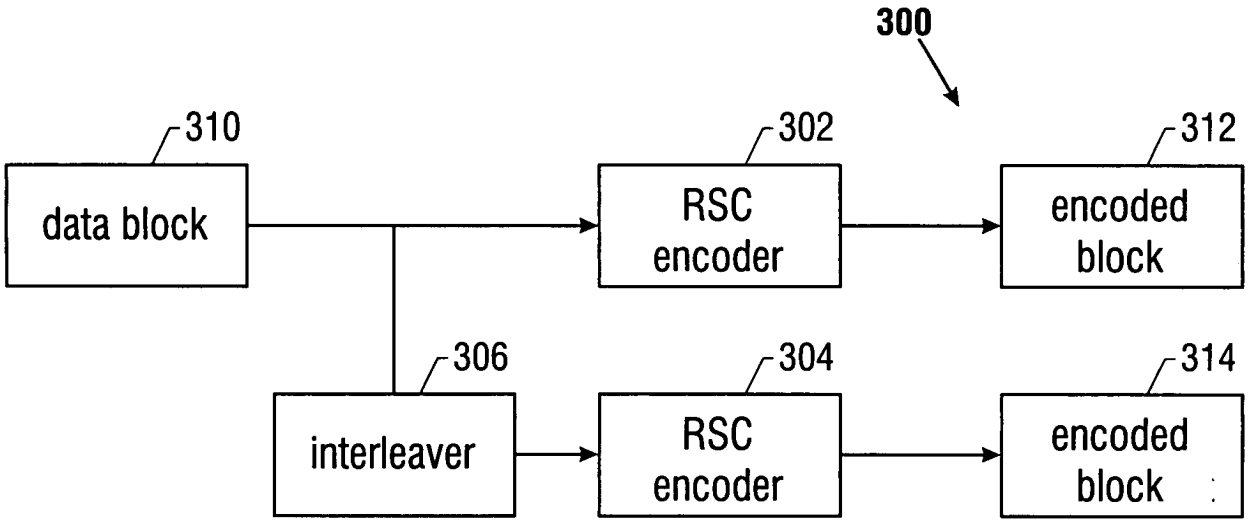


FIGURE 14B



TURBO ENCODER

FIGURE 15

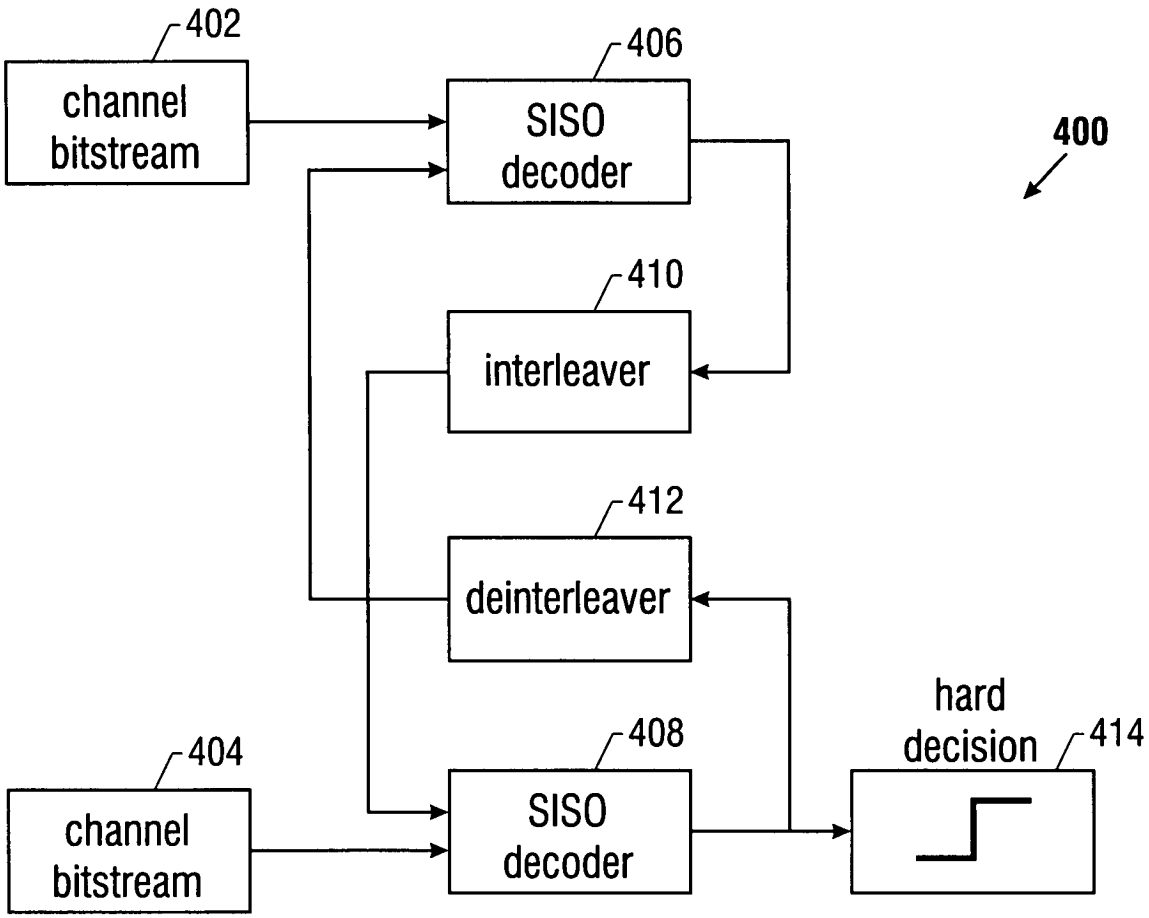

402
channel bitstream
406
SISO decoder
400
410
interleaver
412
deinterleaver
hard decision
414
404
channel bitstream
408
SISO decoder

FIGURE 16